Model Development Phase Template

Date	1 May 2024
Team ID	Team - 737850
Project Title	FetalAI: Using Machine Learning To Predict And Monitor Fetal Health
Maximum Marks	6 Marks

Model Selection Report

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score. This comprehensive report will provide insights into the chosen models and their effectiveness.

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Random Forest	A random forest algorithm could ensemble multiple decision trees trained on different ultrasound image features to improve accuracy in detecting fetal abnormalities.	-	Accuracy score = 98%
Decision Tree	A decision tree algorithm could be employed to construct a tree-like model that makes decisions or predictions based on a series of rules derived from the features extracted from fetal ultrasound images, enabling the classification of normal versus abnormal cases.	-	Accuracy score = 97%

KNN	K-Nearest Neighbors (KNN) algorithm could be used to classify fetal ultrasound images by comparing them with a labeled dataset of known normal and abnormal cases, based on the similarity of their extracted features.	-	Accuracy score = 87%
Logistic Regression	Logistic regression could be employed in the FetalAI model to analyze fetal ultrasound images and predict the probability of a particular birth defect or abnormality based on extracted features from the images.	-	Accuracy score = 87%